

# **Salish Sea**

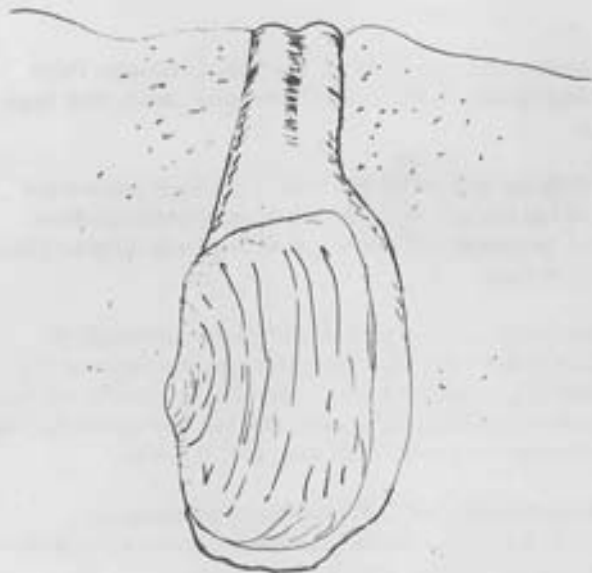
## **Activity Book**



# Salish Sea

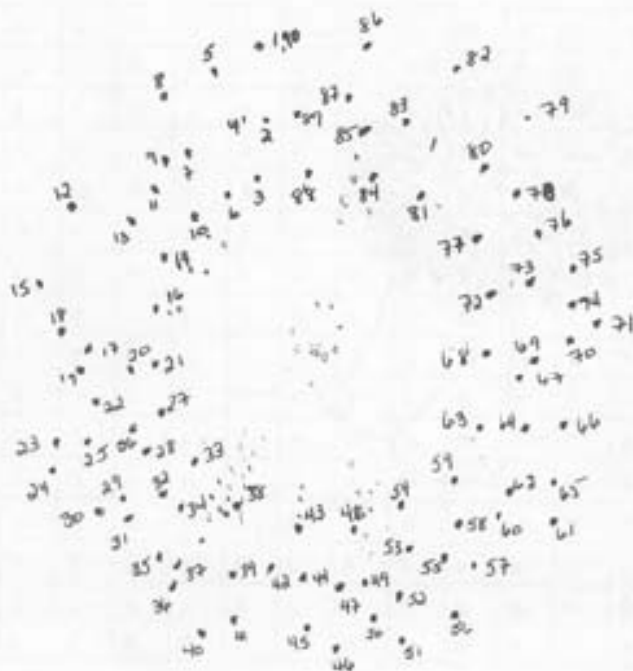
- Salish sea is the traditional name for the inland waters of Canada and Washington State, stretching from Puget Sound to Johnstone Strait, that was used by the First Nation peoples who historically and presently inhabit the area.
- The Salish Sea consists of 3 natural basins: The Strait of Georgia, Puget Sound, and the Strait of Juan de Fuca; along with many islands, both large and small.
- There are many different types of habitats in the area: sandy beaches and rocky shores, mudflats and tidal wetlands, kelp beds, eelgrass meadows, broad expanses of open water, and submerged reefs, all with different plants and animals living in them.
- About ten thousand years ago, massive rivers of ice flowed through the Georgia Strait from northern ice fields. When the ice stream encountered the Olympic Mountains, it parted. One part went into the Puget Sound area, and one part went down the Strait of Juan de Fuca. Glaciers carved the area and when they retreated, left gravel, sands, clay, and till behind.
- Salish Sea area is an extremely rich habitat with a lot of biological productivity. This is due to river discharge carrying nutrients to the ocean and upwelling of cold nutrient rich water to the surface.
- Unfortunately, the Salish Sea is losing its' rich diversity in marine life, especially in the highly populated or used areas.

# Color Me!



**The GEODUCK (gooey-duck) is the largest of all clams. The geoduck is too big for its shell and can't close its shells tight like other clams. For protection it lives buried about three feet deep in the sand. It has two tubes in its long neck (siphon). To eat, it stretches its neck up to the top of the sand where it takes in water full of food through one tube and gets rid of wastes through the other.**

# Connect the Dots!



More kinds of sea stars (sometimes called starfish) are found along the northwest coast than anywhere else in the world. They can be found "holding on" tightly to the side of large rocks or open ledges. Most sea stars have 5 arms, but the number can vary. The Sunflower Sea Star may have twenty or more! If one arm breaks off, a new one will grow in its place.

# Color Me!!!



**Sea Anemones usually cling tightly to rocks with a suction disk. When they do move, it may take hours to travel an inch. They are found in tidepools and can be 1 to 12 inches in diameter. Like jellyfish, they have stinging cells (nematocysts) in their tentacles which are used to paralyze small crabs or fish. They then bring the food to their mouths, located in the center of the tentacles.**

# Can you find these Salish Sea words?

The words are found down, across, diagonally, forwards, and backwards.

J	A	R	O	C	K	Y	S	H	O	R	E	S	H	M
U	G	E	U	F	G	S	H	Y	R	T	N	L	A	R
A	I	S	E	A	U	R	C	H	I	N	D	J	T	O
N	A	F	C	Y	N	L	L	E	G	W	C	I	I	C
D	N	H	K	N	H	L	A	U	O	P	A	T	D	K
E	T	I	C	O	E	N	M	A	B	R	H	R	E	S
F	C	U	M	I	R	T	S	D	T	L	R	O	P	O
U	H	A	G	L	R	E	S	S	M	E	L	T	O	L
C	I	F	L	A	I	C	A	A	M	W	K	I	O	E
A	T	G	H	E	N	I	S	L	Y	X	U	D	L	Q
S	O	E	J	S	G	N	L	M	B	C	Z	E	S	U
T	N	G	A	R	S	U	A	O	M	F	G	S	B	W
R	V	R	O	W	T	C	E	N	A	O	H	N	X	R
A	U	E	G	N	K	L	S	S	A	R	G	L	E	E
I	G	L	G	B	H	L	E	H	Q	W	V	H	J	Z
T	Y	F	R	O	C	K	W	E	E	D	Y	N	L	S

Juan de Fuca Strait

Georgia Strait

Tidepools

Smelt

Rocky Shores

Clams

Rock Sole

Rockweed

Salmon

Seals

Sea Lion

Herring

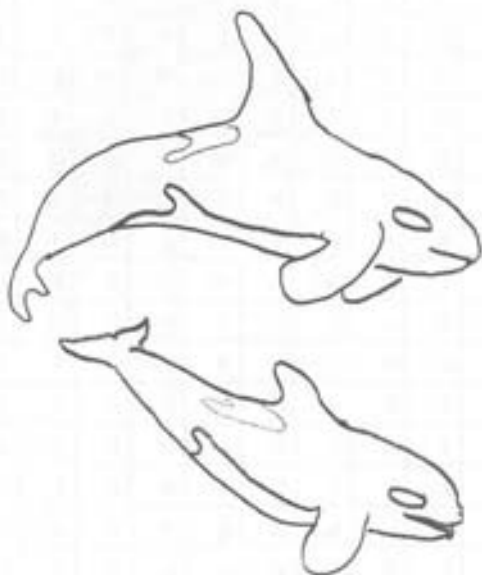
Sea Urchin

Eelgrass

Tides

Giant Chiton

# Color Me!!!



**In the Salish Sea area, Orcas, or Killer Whales, live three different live styles: residents, transients, and offshore. Adult males have a tall straight dorsal fin which can be up to 5 feet tall. Adult females dorsal fins are triangular in shape and smaller, only 3-4 feet tall.**

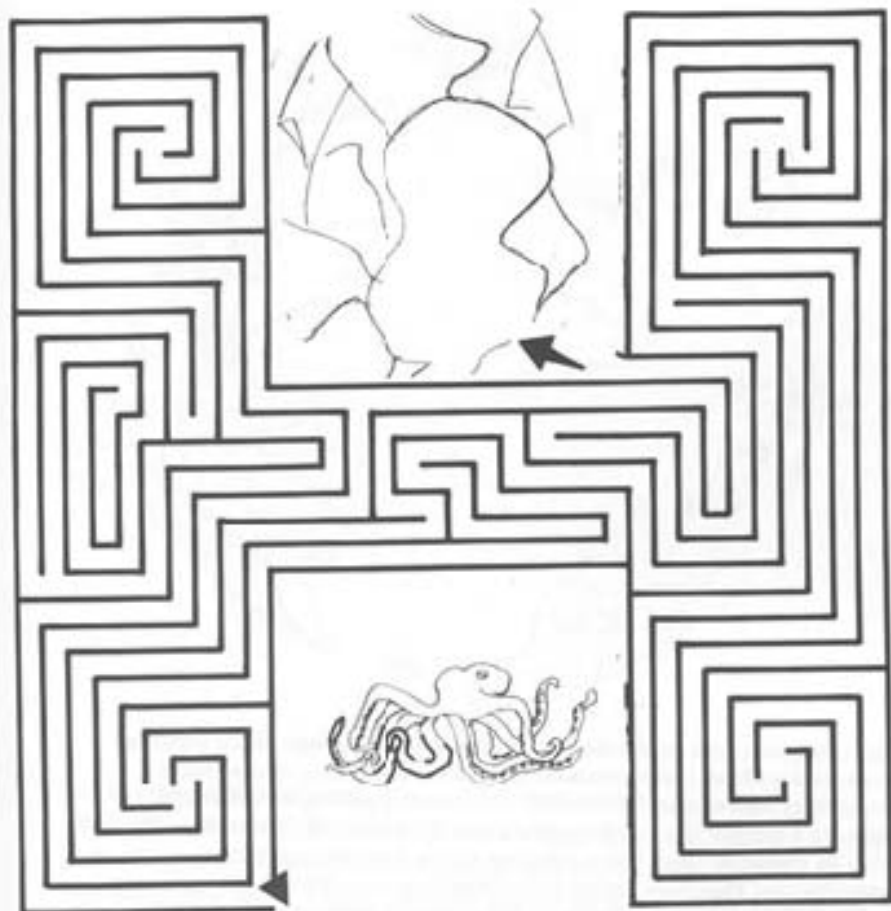
# Salmon Life Cycle



**Adult salmon live in the ocean. They migrate from their feeding grounds up rivers and streams to the stream they were born. There they spawn and die in those rivers, leaving fertile eggs protected under the freshwater gravel. Young fish hatch and grow in those waters for a year or more before migrating downstream through Puget Sound to the sea. One to five years later, mature salmon return to the river to spawn and the cycle begins again.**

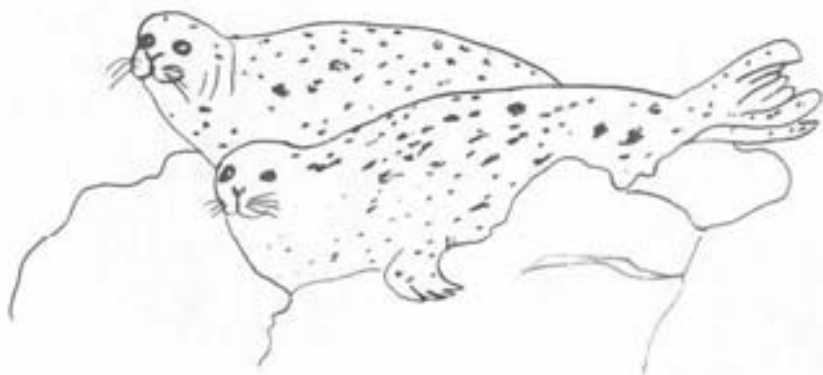


**Can you help this  
Octopus find its cave?**



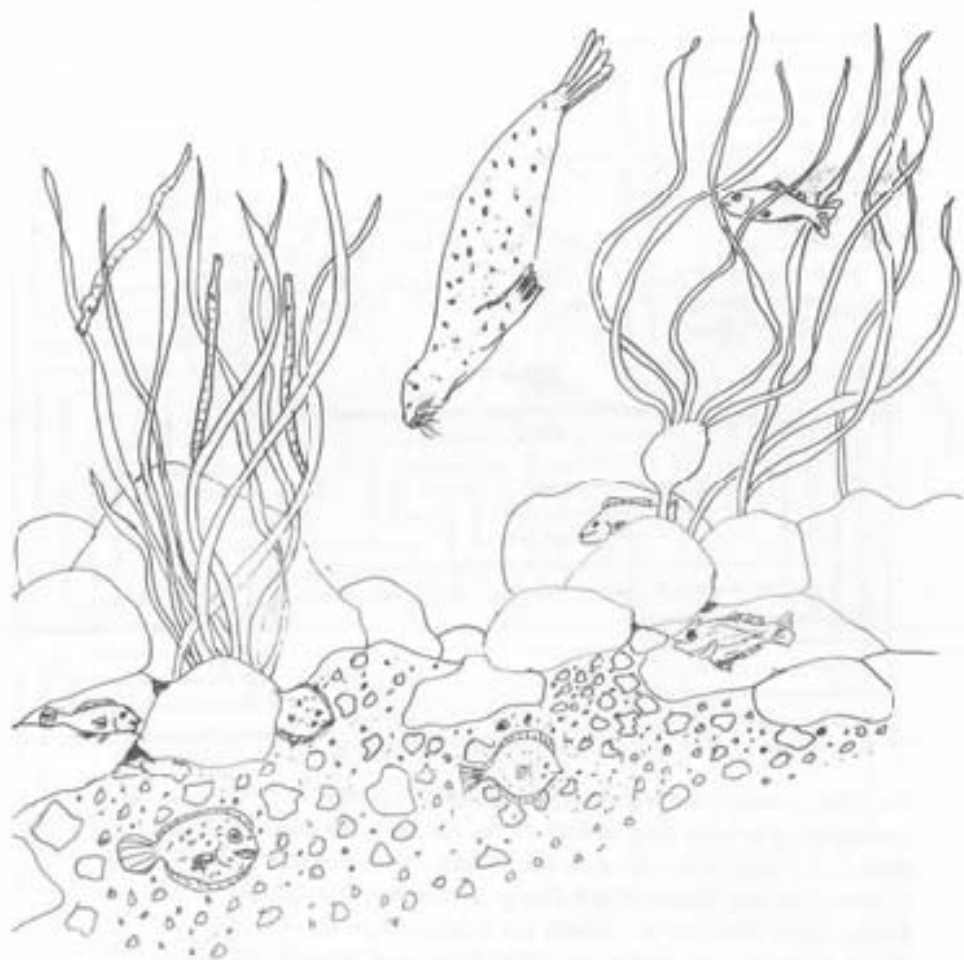
**The Giant Pacific Octopus is the largest kind of octopus in the world. It can weigh up to 600 pounds and have an arm-spread of over 31 feet!**

# Color Me!!!

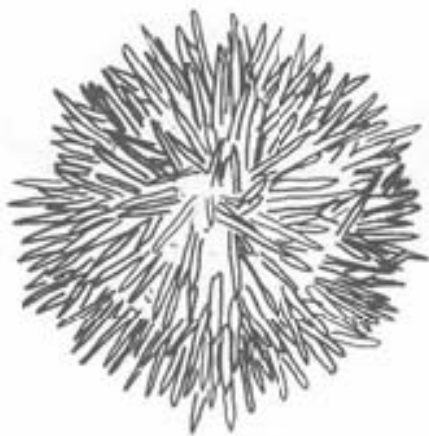


**Pacific Harbor Seals are the most common marine mammal seen in the Salish Sea. Harbor seals are 'true seals' in that they do not have external ear flaps and they can not bring their hind flippers under them to walk. They are often seen laying on rocks during low tide. They can dive as deep as 1,380 feet and stay down as long as 28 minutes!**

**How many fish can you find?**



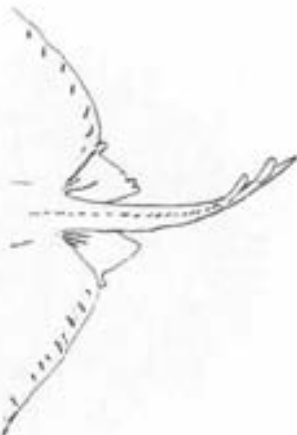
# Color Me!



**Sea Urchins, with their rounded bodies all covered with spines, look like a pincushion than an animal. Urchins use the spines to “walk” as if it were tippy-toeing or stilt-walking. Purple sea urchins are found wave swept ocean rocks, while green sea urchins are found in the quieter tidepools. Urchins eat algae, seaweed, and plankton (tiny floating plants).**

## Match the Fish

Draw a line from half a fish on the left to the other half on the right to see what Wolf Eel, Big Scate, Yellowtail Rockfish, and Pacific Sandab look like.



# Color Me!



**Tufted Puffins eat mostly fish from 6 to 8 inches long. Puffins dive and pursue fish using their wings as paddles to fly underwater. They can carry up to 6 fish crosswise in its bill at one time. How do they do that? The Puffin secures the first fish between its rough tongue and its upper jaw, which leaves the lower bill available to catch more fish! They can also catch fish on one side of its bill and then on the other.**

# Connect the Dots!



**Spiny Dogfish are the most common shark found in the Salish Sea area. They grow up to 5 feet long and are most often seen at the surface of the water at dawn or dusk. They are not dangerous to humans, although watch out for the spine on their back (how they got their name) if you happen to catch one!**

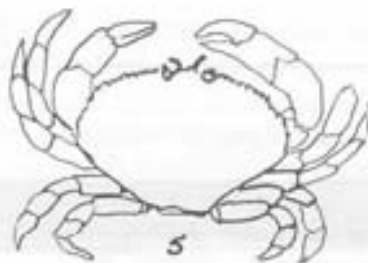
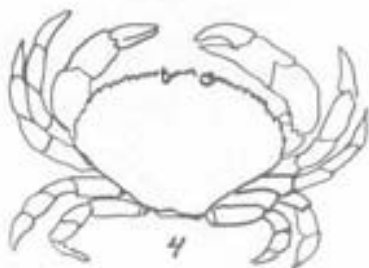
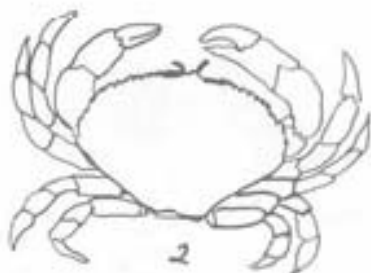
# Color Me!



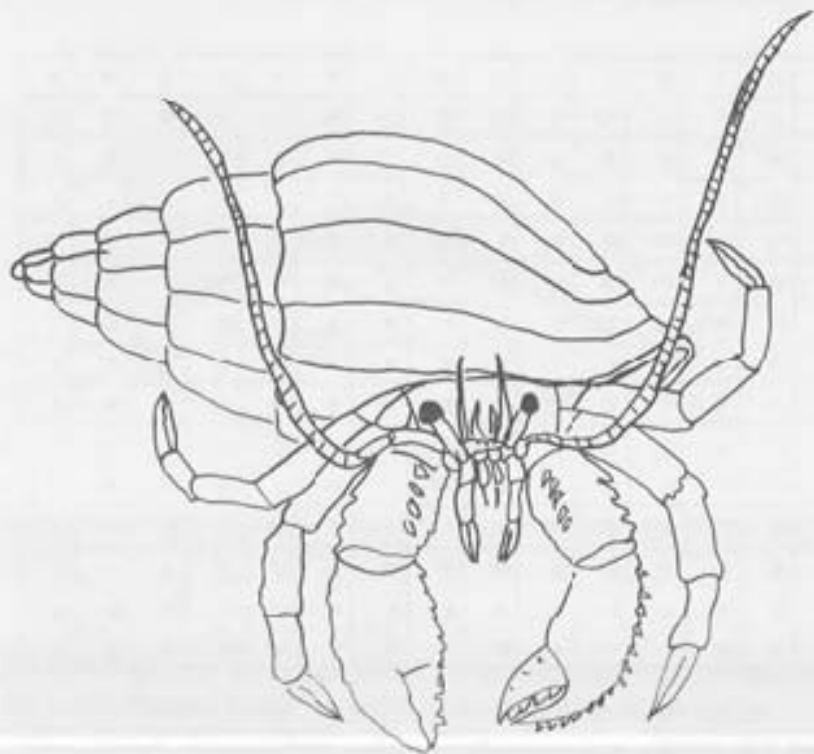
**Sea Otters live in kelp forest and often wrap themselves up in the kelp fronds to keep drifting away when they sleep. Otters eat abalones, crabs, urchins, sea stars, snails and other shellfish. To break open the hard shells, otters pound the shells on rocks they lay on their chests. Sea otters are important for healthy kelp forests by keeping the number of sea urchins (which eat kelp) down.**



**Which two are the same?**



# Color Me!



**Hermit crabs have no shells of their own, so they use the empty shells of other animals as their home. As they grow they have to find and move into larger shells.**

# Can you find these Salish Sea words?

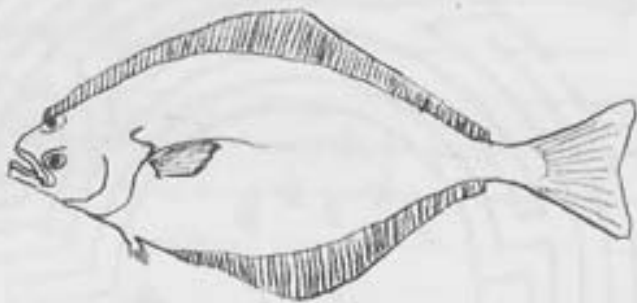
The words are found down, across, diagonally, forwards, and backwards.

V	C	Y	R	E	T	T	O	A	E	S	S	K	O	B
C	A	N	E	M	O	N	E	P	M	A	E	H	D	L
E	W	N	F	X	D	E	S	L	E	C	V	N	K	U
O	Q	A	C	R	A	E	S	G	J	R	U	N	A	E
P	S	S	W	O	U	I	D	E	K	O	N	T	H	M
L	U	A	C	H	U	J	P	Y	S	S	D	F	R	U
L	P	N	A	G	U	V	L	T	A	C	K	I	L	S
Q	O	D	B	L	Y	U	E	F	N	D	A	O	N	S
R	T	L	T	E	C	G	K	R	D	M	U	R	R	E
A	C	A	Z	H	U	N	L	M	I	G	K	L	W	L
T	O	N	F	P	P	B	L	U	O	S	X	V	R	O
S	F	C	E	H	N	A	U	P	J	M	L	O	O	N
A	K	E	Q	G	E	W	B	N	N	X	E	A	T	Y
F	T	J	L	G	H	A	L	I	B	U	T	R	N	E
S	A	N	J	U	A	N	I	S	L	A	N	D	A	D

Vancouver Island  
Puget Sound  
Loon  
Murre  
Sand  
Halibut  
Sea Otter

Orca  
Anemone  
Sea Star  
Bull Kelp  
Blue Mussel  
Crabs  
Octopus

# Color Me!



**Halibut grow so large that, when caught and taken aboard ships, they've killed and maimed people with their thrashing tails. Females can grow up to nearly 500 pounds and almost nine feet in length; males are about half that length and generally weigh under 100 pounds. Most are caught as juveniles and only weigh around 35 pounds.**

**Can you help this salmon  
migrate upstream to find  
her home river bed in order  
to spawn?**



**Did you know that salmon must return to the same area  
in the same river as where they were born?**

# Salish Sea "Mad Lib"

Directions: Fill in the mad lib list, then copy your mad libs in to the blanks in the story below. Once you have filled in all the blanks, read your completed story for a fun look at how animals and habitats depend on each other for survival.

## Mad Lib List:

1. Family member \_\_\_\_\_
2. Somebody's name \_\_\_\_\_
3. Animal \_\_\_\_\_
4. Color \_\_\_\_\_
5. Animal \_\_\_\_\_
6. Things \_\_\_\_\_
7. Animal \_\_\_\_\_

I was swimming in the Puget Sound one spring day with my

\_\_\_\_\_ <sup>1</sup> and our friend \_\_\_\_\_ <sup>2</sup>, who is a

\_\_\_\_\_ <sup>3</sup> very early in the morning. A large

\_\_\_\_\_ <sup>4</sup> \_\_\_\_\_ <sup>5</sup> started to chase us. I think he

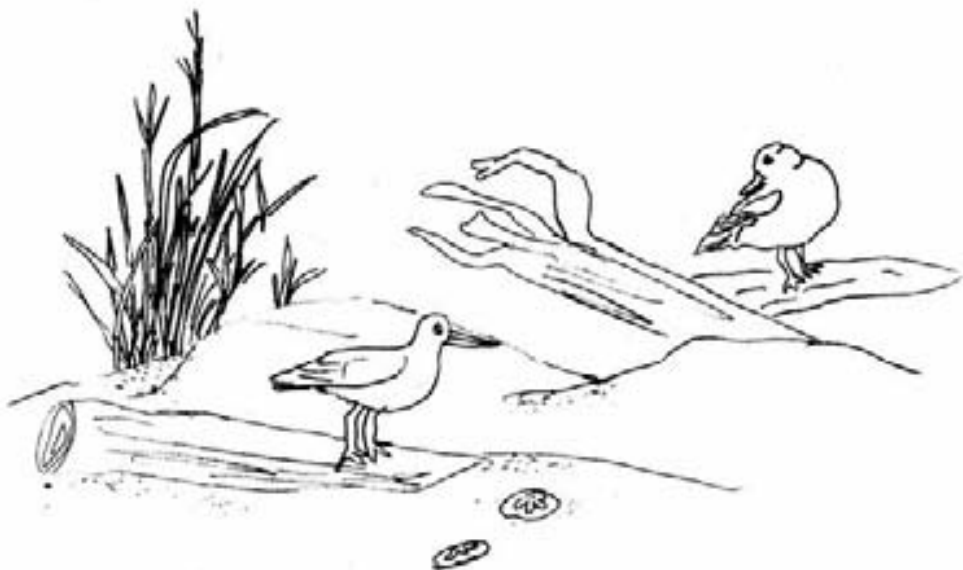
wanted to eat up for breakfast! We ran quickly to get away from it and hid

in some \_\_\_\_\_ <sup>6</sup> that were along the shore. We sure were lucky

they were there so we could get away. We found some \_\_\_\_\_ <sup>7</sup>

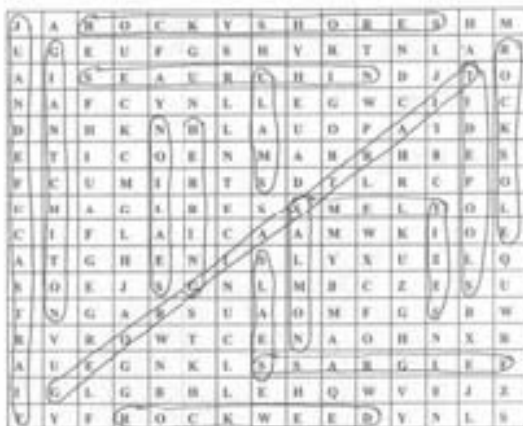
while we where there that we ate for lunch.

# Color Me!



**The beaches, rocky shores, marshes, coastal and open oceans are homes to many different plants and animals. Be polite and do not mess up their homes. Take your trash back to your home, just leave footprints in theirs.**

# Answers



How many fish can you find? 10



## More Answers



**Which two are the same? 1 and 6**



# Even More Answers



## Regional Activity Book Series:

1. **Chesapeake Bay Activity Book** – <http://www.nccos.noaa.gov/education/cbbook>
2. **Coastal North Carolina Activity Book** –  
<http://www.coastalscience.noaa.gov/education/ncbook.pdf>
3. **Salish Sea Activity Book** – <http://www.coastalscience.noaa.gov/education/ssbook.pdf>

Copies of this material can be downloaded from:  
<http://www.coastalscience.noaa.gov/education/ssbook.pdf>



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